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ABSTRACT

A role analysis study of the Margaret I. King Library reference department focused on organization of role activities, their evaluation by reference staff, and patron satisfaction. Observation, interview, and questionnaire techniques were employed to (1) obtain staff job history and academic training; (2) inventory activities from which a list of 93 role activities was compiled; (3) determine on a seven point scale using semantic differential staff's perceptions of activities with respect to importance, interest, complexity, and confidence in performance ability; and (4) determine patron satisfaction and consensus between staff and patrons regarding encounters. Patron service, instruction, and skill maintenance were seen by staff as highly important; the latter two were considered most interesting. Confidence in performance ability varied little between activities. Clerical maintenance was viewed as least complex, and skill maintenance and instruction as most complex: staff were more interested in complex activities. According to patrons, librarians determined their needs accurately in 80 percent of the encounters and in 87 percent provided the right amount of information. The study concluded that role analysis provides insights into effective reference service factors and the importance of the librarian as teacher rather than as information source. The appendices include forms for all interviews and questionnaires. (KP)

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A TECHNICAL REPORT ON A ROLE ANALYSIS PREPARED

FOR THE

REFERENCE DEPARTMENT

OF

MARGARET I. KING LIBRARY

UNIVERSITY OF KENTUCKY

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INTRODUCTION

Objectives

The overall objective of the research has been to study the Reference Department of the MIK Library, using role analysis. The concept of 'role' refers to the behavioral performance of a person, or a category of persons, in relation to some other person, category of persons, or social group. This research has focused on several topics: the organization of role activities in the Reference Department; the evaluation of role activities by the reference staff; and patron satisfaction as it relates to certain aspects of patron-reference staff encounters.

Rationale

Articles published in library journals during the past decade voice the need to develop procedures for evaluating library reference services. Many creative ideas, along with optimistic prediction of the fruitfulness of this or that approach, have been offered, but concrete results are disappointingly few. This research is a modest attempt to develop more rigorous procedures for studying library reference services.

Terminology for Role Analysis

Below is a glossary of analytic terms that will appear in this report:

status -- a position in a network of social relationships; a status is associated with a repertoire of role behaviors, and it nearly always is given a lexical identification by role actors.

role -- a socially standardized activity characteristic of a person,

or a category of persons.

specialization -- the degree of differentiation of role behaviors among members of a social group.

consensus -- (1) the degree to which perceptions of role are shared among persons enacting the same role; (2) the degree to which a role actor and those with whom he interacts share perceptions regarding the performance of the role.

Composition of the Research Team

The research team was composed of a professor and three graduate students of anthropology. One of the graduate students has a master's degree in library science.

Composition of the Reference Department

At the outset of the research, the reference staff was composed of fifteen persons: six professional librarians, a technical assistant, and eight student assistants. The staff was reduced to fourteen, in the early phase of research, when one of the student assistants resigned.

Four professional librarians are employed full time in the Reference Department, a fifth librarian works half-time (20 hours/week) and the sixth librarian's job is divided between the Reference Department and Data Services. The student assistants work part-time, generally about 10 hours/week. However, one of the graduate students works half-time on an internship granted by the Library Science School. All the student assistants, except one, are library science majors. The technical assistant has secretarial and bookkeeping responsibilities but also

performs many of the public-oriented tasks that are the responsibility of the staff at large.

Methods of Data Collection

Data were collected during February, March, and April of 1976. The first week was spent in casual observation of the Reference Department's activities in order to become familiarized with the staff and their duties. In the second week, an interview schedule was administered to obtain information on the job history and academic training of the Reference Department's staff (See Appendix A). This interview accomplished the twin purposes of giving a profile of the professional quality of the reference staff and of permitting the researchers and staff members to become better acquainted.

Following the initial two-week period of familiarization, the research team began to elicit information on the role activities of the Reference Department. Three instruments were devised and administered during the remainder of the research effort. Much useful information continued to be obtained from observation and conversation with reference staff members. The information derived from such informal methods figured very importantly in the designing and interpretation of the formal data-collection instruments.

The first goal of data collection was to obtain an exhaustive list of the job activities performed by the reference staff. A fundamental principle guiding the gathering of these data is one that is characteristic of anthropological research: the informant is encouraged to describe his behavior in terms that are meaningful to him; the interviewer refrains

from imposing his own categories on the informant's commentary.

Each member of the reference staff was interviewed in this way by one of the researchers. A copy of the interview form is subjoined as Appendix B. The staff member was asked to list every activity that he performs or has performed. For each activity cited by an informant further information was sought: (a) specialization of the activity -- i.e., if the activity is performed by a single member of the reference staff or by several; (b) social interaction — i.e., if the activity is performed by an individual acting alone, or if it requires some kind of interaction between two or more persons; (c) the frequency with which the activity is performed.

The second research instrument built on the data gathered in the previous one. The role activity inventories that had been elicited from each staff member were collated, and a master list of 93 role activities for the Reference Department was compiled (see Appendix C). The goal of the second round of interviews was to determine the degree of consensus among staff members with respect to their perceptions and feelings about the role activities previously elicited from them. For this, the semantic differential technique was used. The procedure is to have the informant rate his feelings about something on several bipolar dimensions of meaning. Each dimension is comprised of a seven-point scale; the extremes of the scale represent polar opposites, and the middle is a point of neutrality between the extremes.

Four dimensions were selected to measure the consensus of the reference staff regarding the 93 role activities, as follows:

(1) Importance -- How important is the activity to the functioning of the department?

very unimportant						very important
-3	-2	-1	0	+1	+2	+3

(2) Interest -- Is this activity interesting or uninteresting to you personally?

very uninteresting						very interesting
-3	-2	-1	0	+1	+2	+3

(3) Complexity -- How complex are the proecdures and technical skills employed in this activity?

very simple						very complex
-3	-2	-1	0	+1	+2	+3

(4) Confidence -- How confident are you of your ability to perform this activity?

very insecure						very confident
-3	-2	-1	0	+1	+2	+3

Staff members were asked to evaluate all of the 93 role activities of which they had knowledge.

The last instrument of data collection was designed to determine (a) the library patrons' satisfaction with the reference service, and (b) the degree of consensus between patrons and staff members regarding certain aspects of their encounters. The interview was conducted in two parts, a questionnaire for the patrons and a questionnaire for the reference staff (see Appendix D). Information requested in the two questionnaires was

paired so that consensus between patron and staff members in each encounter could be appraised. The reference service encounter survey was administered in a sample of randomly selected hour-periods, during a week's time. Ninety-seven paired questionnaires were obtained.

Analysis of Data

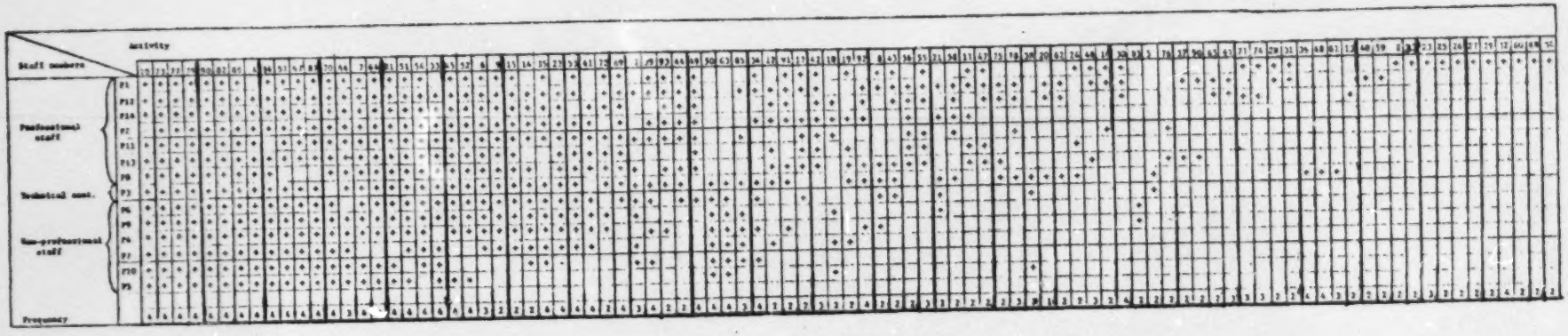
Data obtained from the formal interview procedures described above were submitted to several kinds of statistical analysis. The nature of the analyses and results are described under the following rubrics: (1) the organization of role activities in the Reference Department; (2) role activity evaluation; (3) patron satisfaction and patron-staff consensus.

THE ORGANIZATION OF ROLE ACTIVITIES IN THE REFERENCE DEPARTMENT

The scalogram (Table One) shows the distribution of the 93 role activities plotted against reference staff members. The professional librarians are set off from the non-professional (student) staff; however, the library science student who works in the Reference Department half-time on a graduate internship has been placed with the professionals because the activities she performs more nearly resemble those of the professional staff than the non-professional staff. The activities are signified by the numbering system used in the Reference Activity Inventory (Appendix C). A rough estimation of the frequency with which each activity occurs is coded beneath the scalogram. (The scalogram merely records the performance of activities in gross terms. A truer calculation of the distribution of activities would estimate the percentage of total work-time that each person devotes to each activity, but such a calculation would have been very difficult to tabulate.)

TABLE ONE

ROLE ACTIVITY PROFILE OF MIK REFERENCE DEPARTMENT



No longer occurs: 1
Less than once/week: 2
At least once/week: 3
Daily: 4

A first matter of interest is the number of activities performed by each staff member, as indicated in Table Two.

TABLE TWO

Number and Percentage of Activities Performed

Staff member	No. of activities performed	Percentage of total
P12	67	72
P1	61	66
P3	57	61
P14	55	59
P8	50	54
P2	48	52
P11	48	52
P6	44	47
P13	42	45
P4	41	44
P9	39	42
P7	32	34
P10	29	31
P5	24	26
	$\bar{x}$ = 45.5	$\bar{x}$ = 49

A number of conclusions may be drawn from this distribution: as a general rule, the professional staff (including the graduate intern) perform a majority of the 93 activities, 52% and more, whereas the student assistants perform less than half the activities. P13, a professional librarian, is the exception in performing 45% of the activities, but this person shares duties between the Reference Department and Data Services. Student assistants performing the fewest activites are those who work primarily nights and weekends. Considering the reference staff collectively, the average number of activities performed by staff members is 46 (49%). The technical assistant, P3, carries out a high percentage of activities (61%).

A count of the frequencies of activities is indicated in the following table:

TABLE THREE

Activities in Terms of Reported Frequency

		Raw score	Percent
Activities occur:	daily	34	37
	at least once/week	14	15
	less than once/week	44	47
	no longer occurs	1	1
		93	100

It is noteworthy that activites occurring on a daily basis usually have to do with services provided to library patrons and with 'housekeeping' tasks. In general, these are the least specialized of the activities; any staff member may perform them. Activities occurring with less frequency have more to do with the administration of the Reference Department and with its relationships to other library departments and functions in the university system. These activities are the relatively more specialized ones; a few persons, or perhaps only one person, perform them. The scalogram (Table One) shows those activities which are relatively specialized and those which are not.

The information contained in Table One has been submitted to a correlational analysis. Using Driver's G, a coefficient of agreement, the activities of each staff member have been compared with those of every other staff member. Driver's G is a derivative of the more familiar r_{hk} correlation coefficient. It differs from r_{hk} in that negative traits

that are shared by the cases being compared do not figure in the calculation. The Driver's G coefficient measures the degree of agreement between the positive traits of cases. It is always positive and varies between .00 (zero) and 1.00 (unity). The former is complete lack of agreement and the latter is perfect association.

The results of using this procedure are shown in the matrix (Table Four). The column of numbers in the right of the matrix is the average G coefficient for each staff member. Examining the matrix, one is immediately struck by the fact that all of the scores are rather high; the lowest coefficient, .49, is obtained between P8 and P10, between P1 and P7, and between P1 and P10. This reflects the differences between the relatively broad distribution of specialized and unspecialized activities of two professional librarians, P1 and P8, compared with the student assistants, P7 and P10, who perform a much narrower spectrum of relatively unspecialized activities.

The highest G coefficients are .89 between student assistants, P9 and P4, and .88 between P14 and P2 and between P14 and P11, all professionals. This is quite significant. As will be made clear shortly, P9 and P4 by their shared activities represent the 'core' of the non-professional staff. In a similar fashion, P14, P2, and P11 represent by their shared activities the 'core' of the professional staff.

Considering the mean G coefficients for each individual, P1, the head of the Reference Department, has the lowest mean. This is explained by the fact that P1 has many specialized administrative activities which no other staff member performs. Individuals with the highest means, P14 and P2, are professional staff. Their role activities most closely agree with

TABLE FOUR

Correlations among staff members by activities (Driver's G coefficient)

	P1	P12	P14	P2	P11	P13	P8	P3	P6	P9	P4	P7	P10	P5	Average
P1	-	.72	.65	.69	.64	.71	.67	.60	.63	.54	.63	.49	.49	.50	.569
P12		-	.83	.79	.79	.73	.77	.77	.62	.66	.69	.57	.58	.50	.644
P14			-	.88	.88	.85	.84	.73	.74	.76	.75	.68	.60	.65	.703
P2				-	.85	.84	.79	.76	.80	.76	.78	.71	.63	.63	.708
P11					-	.80	.78	.72	.76	.78	.75	.68	.63	.60	.690
P13						-	.83	.67	.71	.73	.71	.67	.56	.64	.675
P8							-	.69	.70	.65	.67	.59	.49	.50	.641
P3								-	.80	.75	.77	.67	.68	.60	.658
P6									-	.84	.81	.62	.75	.65	.674
P9										-	.89	.84	.77	.76	.695
P4											-	.76	.77	.70	.691
P7												-	.75	.66	.621
P10													-	.75	.604
P5														-	.581
Matrix Av. =															.654

the role activities of all other staff members, professional and non-professional. The mean for the entire matrix is .654. Four professionals, four student assistants, and the technical assistant lie above the mean for the matrix; other staff members fall below.

In Figure One role activity sharing is represented diagramatically. The diagrams were constructed from the Driver's G coefficients (Table Four) by determining for each staff member the other staff member with whom there is the highest coefficient of sharing. For example, P1 is most nearly associated with P12 with a G coefficient of .72; P12 is most nearly associated with P14 with a G coefficient of .83 and so forth. This procedure resulted in two groups. The upper group is the professional staff, plus the graduate student intern; the lowe group is the non-professional staff, including the technical assistant. The double-stranded relationships P11 $\rightleftarrows$ P14 $=$ P2 and P9 $\rightleftarrows$ P4 indicate a very strong mutual sharing of activities. The subgroup of P11 $\rightleftarrows$ P14 $\rightleftarrows$ P2 perform activities which are central to the professional staff. The subgroup of P9 $\rightleftarrows$ P4 represents the core activities of the non-professional staff. The activities shared between the staff members of each subgroup are listed as follows:

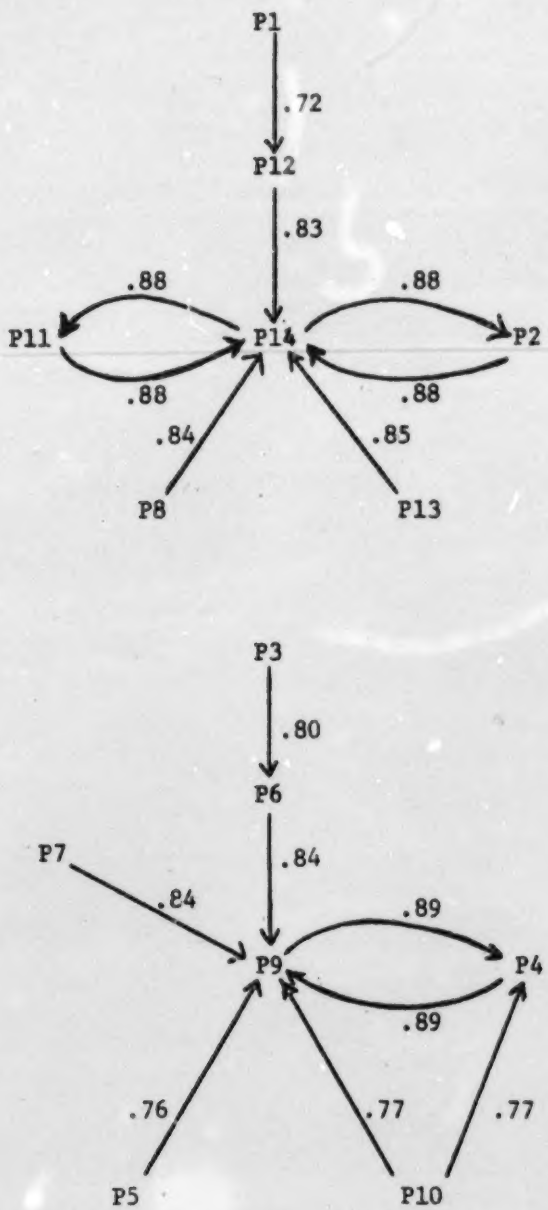
A. Professional core activities: 4, 6-7, 9-10, 14-15, 18, 22, 23, 35, 41-42, 44-45, 49, 51-52, 54, 56-58, 64, 66-67, 70, 73, 77, 79-82, 87-89, 92-93.

B. Non-professional core activities: 4, 6-7, 9-10, 14-15, 22, 23, 35, 41, 45, 50-54, 57, 63-64, 66-67, 70, 72-73, 77, 79-83, 85-88.

Twenty-eight of the activities in these two lists are shared, indicating a considerable overlap in the core activities of the professional and non-professional staff.

FIGURE ONE

Organization of Reference Staff According to Driver's G Coefficients



A staff member in each group-- P1 among the professionals and P3 among the non-professionals--is one link removed from the core. This is easily accounted for; P1, head of the Reference Department, and P3, the technical assistant, perform a number of specialized activities in relation to their respective groups.

What are the policy implications of these data? From the standpoint of role analysis, the remarkable characteristic of the Reference Department is the lack of clear demarcation of role activities among different status position. Roles do not segregate to any great degree among the different status positions of 'department head' and 'assistant head', 'technical assistant', 'professional staff' and 'non-professional staff'. The Reference Department is a small organization. To perform efficiently all staff members must join in the yeoman's task of serving the public in a variety of role capacities. It cannot be recommended that a rearrangement and increased specialization of role activities among staff members would enhance the efficiency of the reference service. This conclusion holds so long as the role activity inventory of the Reference Department and the size and composition of its staff remain constituted as they now are.

ROLE ACTIVITY EVALUATION

As noted above the research made use of the semantic differential technique to identify the reference staff assessment of their activities in terms of four dimensions. These dimensions are importance (of the activity to the department), interest, confidence and complexity. The reference staff evaluated activities which they themselves performed. Only those activities which were evaluated by at least seven staff members

were included. This section of the report will present results of the analysis of the semantic differential data.

Mean Semantic Differential Scores

The mean scores associated with each activity are indicated below in ranked lists. The mean score is supplemented by the variance score. The variance score indicates the extent that the various ratings given by staff members were dispersed. A low score would indicate relatively high consensus among the staff and conversely a high score would suggest a higher level of disconsensus. The activities, of course, were derived from one of the early interviews and reflect with limited modification the terminology used by staff members.

In reading the following tables it should be noted that responses could range from plus three (+3) to minus three (-3). Further each table includes a summary which indicates range, median and mean.

To obtain a clearer understanding of the results of this component of the inquiry the specific activities were grouped by a member of the research team into categories which reflect related functions. These functional categories are instructional activities, skill maintenance activities, patron service activities, maintenance activities and surrogate activities. Instructional activities are characterized by explicit teaching functions. The skill maintenance category consists of those activities which would result in up-dating knowledge of reference tools. Patron service activities all deal with the provision of information to department clients. Patron service activities which are explicitly instructional are included in the instructional service category. The main-

TABLE FIVE

A List of Activities Ranked in Terms of Mean Importance Score

		$\bar{x}$	s^2
1.	Training student assistants.	+2.8	(0.2)
2.	Teaching use of card catalog, periodical indexes, etc.	+2.7	(0.4)
3.	Referring reference questions to more experienced staff.	+2.7	(0.6)
4.	Answering ready reference questions.	+2.6	(0.6)
5.	Orienting clients to the layout of MIK.	+2.5	(0.5)
6.	Studying reference materials and becoming acquainted with new items.	+2.5	(0.9)
7.	Teaching students how to determine proper subject headings in card catalogue.	+2.5	(0.9)
8.	Answering "how to use" questions.	+2.4	(1.6)
9.	Giving tours to freshman students on library use.	+2.3	(0.5)
10.	Interpreting information on catalog cards.	+2.3	(1.1)
11.	Answering requests to find source materials on particular topics.	+2.3	(1.3)
12.	Answering strictly factual questions.	+2.3	(1.1)
13.	Pursuing search questions away from the desk.	+2.3	(1.6)
14.	Looking out for people who seem to need help.	+2.1	(1.0)
15.	Answering directional questions.	+2.1	(0.9)
16.	Answering telephone questions.	+2.1	(1.5)
17.	Standing by for desk duty (substitute for absent staff member or assist during heavy work period).	+2.1	(3.4)
18.	Answering library policy questions.	+2.1	(0.7)
19.	Watching the desk.	+2.1	(1.0)

Strongly Positive

20.	Referring questions to branch library.	+2.0	(0.6)
21.	Helping handicapped persons obtain books from the stacks.	+1.9	(0.8)
22.	Consulting catalog department personnel about card catalog problems, such as blind references.	+1.9	(1.9)
23.	Answering questions on library procedures, e.g., what to do if book not on shelves.	+1.9	(2.2)
24.	Attending reference staff meetings.	+1.9	(1.0)
25.	Picking up payroll checks.	+1.8	(2.4)
26.	Starting students on a paper.	+1.8	(2.2)
27.	Assisting customers fill out request cards for items on order or still being processed.	+1.5	(0.5)
28.	Reshelving books.	+1.5	(1.5)
29.	Supervising reference room (inventory, housekeeping, etc.).	+1.4	(2.0)
30.	Trouble-shooting problems related to technical services.	+1.3	(1.9)
31.	Reading shelves.	+1.1	(2.5)
32.	Distributing campus guides, maps, and library guides to the public.	+1.1	(0.8)

Moderately Positive

33.	Signing out items kept at desk for building use.	+0.9	(0.8)
34.	Verifying bibliographic information on green order slips.	+0.8	(2.8)
35.	Supervising bibliography room (inventory, housekeeping, etc.).	+0.7	(2.9)
36.	Servicing Xerox machine.	+0.6	(2.4)
37.	Closing reference room at night.	+0.6	(2.5)

Somewhat Positive

38.	Closing bibliography room at night.	+0.5	(2.3)
39.	Keeping tally of questions received at the desk.	+0.4	(2.3)

Somewhat Positive

40.	Paging patrons who receive phone calls at the library.	-0.1	(2.7)
41.	Enforcing rules against eating in the library, bringing animals into the building, etc.	-0.2	(1.4)
42.	Tending Interlibrary Loan truck during hours when Interlibrary Loan is closed.	-0.4	(2.3)
43.	Taking phone calls on Data Services line.	-0.5	(4.9)

Somewhat Negative

44.	Straightening chairs, etc.	-1.1	(2.9)
45.	Answering phone for Instructional Services and AIDS.	-1.3	(2.3)

Negative

Summary

Range +2.8 to -1.3
Median +1.9
Mean +1.49

TABLE SIX

A List of Activities Ranked in Terms of Mean Interest Score

		$\bar{x}$	s^2	
1.	Pursuing search questions away from desk.	+2.3	(0.7)	Strongly Positive
2.	Studying reference materials and becoming acquainted with new items.	+2.2	(2.2)	
3.	Answering "how to use" questions.	+2.0	(1.9)	Moderately Positive
4.	Answering requests to find source materials on particular topics.	+2.0	(1.0)	
5.	Answering ready reference questions.	+1.9	(0.6)	
6.	Answering strictly factual questions.	+1.8	(0.6)	
7.	Looking out for people who seem to need help	+1.7	(1.2)	
8.	Answering telephone questions.	+1.6	(0.7)	
9.	Starting students on a paper.	+1.6	(2.1)	
10.	Training student assistants.	+1.6	(3.4)	
11.	Giving tours to freshman students on library use.	+1.6	(2.3)	
12.	Referring reference questions to more experienced staff.	+1.4	(1.0)	
13.	Teaching students how to determine proper subject headings in card catalogue.	+1.3	(1.9)	
14.	Teaching use of card catalog, periodical indexes, etc.	+1.3	(1.9)	
15.	Attending reference staff meetings.	+1.3	(2.9)	
16.	Interpreting information on catalog cards.	+1.1	(0.9)	

17.	Watching the desk.	+0.8	(1.4)
18.	Standing by for desk duty (substitute for absent staff member or assist during heavy work period).	+0.8	(2.6)
19.	Referring questions to branch library.	+0.8	(1.2)
20.	Trouble-shooting problems related to technical services.	+0.6	(1.4)
21.	Distributing campus guides, maps, and library guides to the public.	+0.5	(0.6)
22.	Orienting clients to the layout of MIK.	+0.4	(1.9)
23.	Answering library policy questions.	+0.2	(1.1)

Somewhat Positive

24.	Consulting catalog department personnel about card catalog problems, such as blind references.	0.0	(1.0)

Neutral

25.	Answering questions on library procedures, e.g., what to do if book not on shelves.	-0.1	(1.2)
26.	Helping handicapped persons obtain books from the stacks.	-0.2	(3.1)
27.	Answering directional questions.	-0.3	(2.4)
28.	Supervising reference room (inventory, housekeeping, etc.)	-0.6	(2.3)
29.	Picking up payroll checks.	-0.7	(5.1)
30.	Supervising bibliography room (inventory, housekeeping, etc.)	-0.7	(3.3)
31.	Keeping tally of questions received at the desk.	-0.8	(1.8)
32.	Assisting customers fill out request cards for items on order or still being processed.	-0.9	(1.5)

Somewhat Negative

33.	Taking phone calls on Data Services line.	-1.0	(3.8)	Somewhat Negative
34.	Verifying bibliographic information on green order slips.	-1.1	(2.1)	Moderately Negative
35.	Closing bibliography room at night.	-1.2	(1.7)	
36.	Reshelving books.	-1.2	(2.2)	
37.	Closing reference room at night.	-1.2	(1.7)	
38.	Servicing Xerox machine.	-1.3	(2.4)	
39.	Signing out items kept at desk for building use.	-1.3	(2.4)	
40.	Tending Interlibrary Loan truck during hours when Interlibrary Loan is closed.	-1.3	(2.0)	
41.	Answering phone for Instructional Services and AIDS.	-1.4	(1.8)	
42.	Paging patrons who receive phone calls at the library.	-1.5	(2.3)	
43.	Enforcing rules against eating in the library, bringing animals into the building, etc.	-1.9	(3.0)	
44.	Straightening chairs, etc.	-2.0	(1.5)	
45.	Reading shelves.	-2.2	(1.3)	Strongly Negative

Summary

Range	+2.3 to -2.2
Median	+0.2
$\bar{x}$	+.18

TABLE SEVEN

A List of Activities Ranked in Terms of Mean Confidence Score

		$\bar{X}$	s^2	
1.	Picking up payroll checks.	+2.9	(0.1)	Strongly Positive
2.	Straightening chairs, etc.	+2.8	(0.3)	
3.	Signing out items kept at desk for building use.	+2.7	(0.4)	
4.	Reshelving books.	+2.7	(0.4)	
5.	Helping handicapped persons obtain books from the stacks.	+2.6	(0.4)	
6.	Answering directional questions.	+2.6	(0.4)	
7.	Closing bibliography room at night.	+2.5	(0.5)	
8.	Supervising reference room (inventory, housekeeping, etc.)	+2.4	(0.9)	
9.	Reading shelves.	+2.4	(1.0)	
10.	Referring reference questions to more experienced staff.	+2.4	(0.5)	
11.	Supervising bibliography room (inventory, housekeeping, etc.)	+2.4	(0.5)	
12.	Orienting clients to the layout of MIK.	+2.3	(0.4)	
13.	Giving tours to freshman students on library use.	+2.3	(1.1)	
14.	Teaching use of card catalog, periodical indexes, etc.	+2.3	(0.8)	
15.	Distributing campus guides, maps, and library guides to the public.	+2.3	(1.1)	
16.	Interpreting information on catalog cards.	+2.2	(0.8)	
17.	Closing reference room at night.	+2.2	(1.2)	
18.	Answering ready reference questions.	+2.2	(0.5)	

Strongly Positive

19.	Answering strictly factual questions.	+2.1	(0.4)
20.	Pursuing search questions away from the desk.	+2.1	(0.5)
21.	Watching the desk.	+2.1	(1.0)

22.	Answering telephone questions.	+2.0	(0.8)
23.	Assisting customers fill out request cards for items on order or still being processed.	+2.0	(0.9)
24.	Tending Interlibrary Loan truck during hours when Interlibrary Loan is closed.	+2.0	(1.4)
25.	Training student assistants.	+2.0	(1.5)
26.	Studying reference materials and becoming acquainted with new items.	+2.0	(1.1)
27.	Keeping tally of questions received at the desk.	+2.0	(1.5)
28.	Answering questions on library procedures, e.g., what to do if book not on shelves.	+2.0	(0.8)
29.	Standing by for desk duty (substitute for absent staff member or assist during heavy work period).	+2.0	(1.8)
30.	Attending reference staff meetings.	+2.0	(1.0)
31.	Starting students on a paper.	+1.9	(0.6)
32.	Answering requests to find source materials on particular topics.	+1.9	(0.7)
33.	Answering library policy questions.	+1.9	(0.6)
34.	Verifying bibliographic information on green order slips.	+1.8	(1.7)
35.	Teaching students how to determine proper subject headings in card catalogue.	+1.8	(1.1)
36.	Answering "how to use" questions.	+1.8	(0.9)
37.	Looking out for people who seem to need help.	+1.8	(2.2)

Moderately Positive

Strongly Positive

19.	Answering strictly factual questions.	+2.1	(0.4)
20.	Pursuing search questions away from the desk.	+2.1	(0.5)
21.	Watching the desk.	+2.1	(1.0)

Moderately Positive

22.	Answering telephone questions.	+2.0	(0.8)
23.	Assisting customers fill out request cards for items on order or still being processed.	+2.0	(0.9)
24.	Tending Interlibrary Loan truck during hours when Interlibrary Loan is closed.	+2.0	(1.4)
25.	Training student assistants.	+2.0	(1.5)
26.	Studying reference materials and becoming acquainted with new items.	+2.0	(1.1)
27.	Keeping tally of questions received at the desk.	+2.0	(1.5)
28.	Answering questions on library procedures, e.g., what to do if book not on shelves.	+2.0	(0.8)
29.	Standing by for desk duty (substitute for absent staff member or assist during heavy work period).	+2.0	(1.8)
30.	Attending reference staff meetings.	+2.0	(1.0)
31.	Starting students on a paper.	+1.9	(0.6)
32.	Answering requests to find source materials on particular topics.	+1.9	(0.7)
33.	Answering library policy questions.	+1.9	(0.6)
34.	Verifying bibliographic information on green order slips.	+1.8	(1.7)
35.	Teaching students how to determine proper subject headings in card catalogue.	+1.8	(1.1)
36.	Answering "how to use" questions.	+1.8	(0.9)
37.	Looking out for people who seem to need help.	+1.8	(2.2)

38.	Referring questions to branch library.	+1.7	(2.0)	Moderately Positive
39.	Consulting catalog department personnel about card catalog problems, such as blind references.	+1.7	(1.0)	
40.	Taking phone calls on Data Service line.	+1.7	(2.5)	
41.	Answering phone for Instructional Services and AIDS.	+1.4	(3.8)	
42.	Enforcing rules against eating in the library, bringing animals into the building, etc.	+0.9	(4.1)	Slightly Positive
43.	Servicing Xerox machine.	+0.7	(1.7)	
44.	Paging patrons who receive phone calls at the library.	+0.5	(3.8)	
45.	Trouble-shooting problems related to technical services.	+0.3	(3.5)	

Summary

Range	+2.9 to +0.3
Median	+2.00
Mean	+2.06

TABLE EIGHT

A List of Activities Ranked in Terms of Mean Complexity Score

		$\bar{x}$	s^2	
1.	Pursuing search questions away from desk.	+1.8	(1.0)	Moderately Positive
2.	Trouble-shooting problems related to technical services.	+1.5	(0.9)	
3.	Starting students on a paper.	+1.5	(1.0)	
4.	Answering requests to find source materials on particular topics.	+1.5	(1.8)	
5.	Teaching use of card catalog, periodicals, indexes, etc.	+1.3	(0.8)	
6.	Studying reference materials and becoming acquainted with new items.	+1.3	(0.6)	
7.	Teaching students how to determine proper subject headings in card catalogue.	+1.0	(0.7)	Somewhat Positive
8.	Interpreting information on catalog cards.	+0.9	(0.8)	
9.	Answering telephone questions.	+0.8	(1.4)	
10.	Giving tours to freshmen students on library use.	+0.8	(2.2)	
11.	Consulting catalog department personnel about card catalog problems such as blind references.	+0.8	(1.0)	
12.	Training student assistants.	+0.8	(2.8)	
13.	Answering strictly factual questions.	+0.8	(0.4)	
14.	Answering ready reference questions.	+0.8	(1.0)	
15.	Answering "how to use" questions.	+0.5	(1.1)	
16.	Orienting clients to the layout of MIK.	+0.3	(3.0)	
17.	Answering library policy questions.	+0.1	(3.0)	

18.	Referring reference questions to more experienced staff.	0.0	(3.3)	Neutral
19.	Referring questions to branch library.	-0.1	(3.2)	Somewhat Negative
20.	Attending reference staff meetings.	-0.1	(3.7)	
21.	Looking out for people who seem to need help.	-0.2	(3.5)	
22.	Watching the desk.	-0.2	(3.0)	
23.	Verifying bibliographic information on [book] order slips.	-0.3	(2.1)	
24.	Answering questions on library procedures, e.g., what to do if book not on shelves.	-0.5	(3.3)	
25.	Standing by for desk duty (substitute for absent staff member or assist during heavy work period).	-0.5	(2.5)	
26.	Servicing Xerox machine.	-0.6	(2.1)	
27.	Paging patrons who receive phone calls at the library.	-0.6	(3.9)	
28.	Taking phone calls on Data Service line.	-0.7	(3.3)	
29.	Helping handicapped persons obtain books from the stacks.	-0.9	(1.4)	
30.	Supervising reference room (inventory, housekeeping, etc.).	-0.9	(2.3)	
31.	Assisting customers fill out request cards for items on order or still being processed.	-1.2	(2.0)	Moderately Negative
32.	Reading shelves.	-1.2	(3.1)	
33.	Answering directional questions.	-1.2	(2.0)	
34.	Answering phone for Instructional Services and AIDS.	-1.3	(2.3)	

35.	Tending Interlibrary Loan truck during hours when Interlibrary Loan is closed.	-1.6	(1.7)
36.	Supervising bibliography room (inventory, housekeeping, etc.)	-1.7	(1.8)
37.	Enforcing rules against eating in the library, bringing animals into the building, etc.	-1.8	(1.1)
38.	Closing bibliography room at night.	-1.8	(1.3)
39.	Closing reference room at night.	-1.8	(1.1)

Moderately Negative

40.	Distributing campus guides, maps, and library guides, maps, and library guides to the public.	-2.0	(1.5)
41.	Picking up payroll checks.	-2.1	(1.9)
42.	Reshelving books.	-2.1	(1.0)
43.	Signing out items kept at desk for building use.	-2.2	(0.6)
44.	Keeping tally of questions received at the desk.	-2.2	(1.3)
45.	Straightening chairs, etc.	-2.6	(0.8)

Strongly Negative

Summary

Range +1.8 to -2.6
Median -0.3
Mean -0.35

tenance category includes those activities which might be described as housekeeping functions. The last category labeled surrogate functions consists of activities that the reference department performs for other departments.

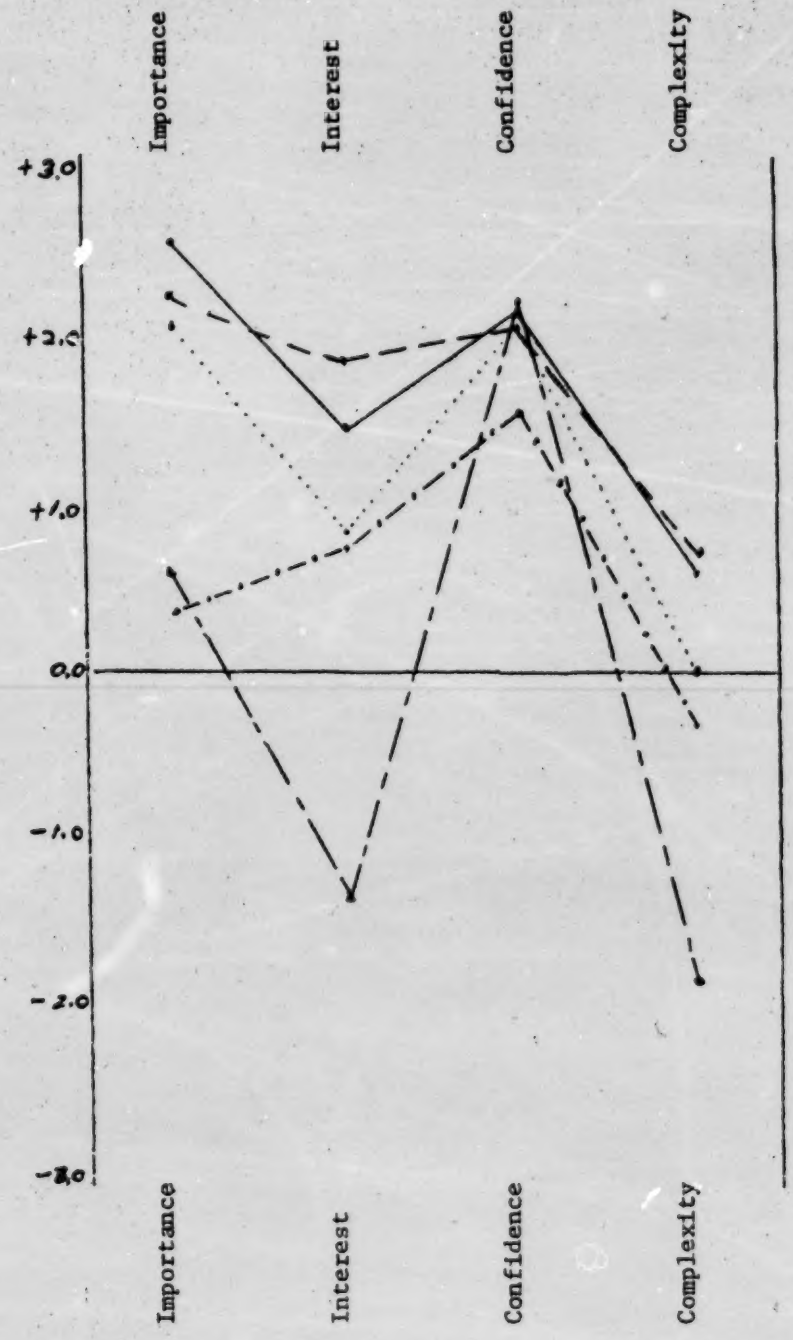
The analysis of the aggregated mean scores in terms of the four dimensions is indicated in Figure Two and Table Nine.

The instructional, skill maintenance, and patron service complexes were cgaracterized by high scores in terms of importance. These complexes also scored high in terms of interest, confidence and complexity. Maintenance activities were scored low in all dimensions but confidence. In this case the confidence score was the highest of all. This score profile reflects the routine nature of these activities. A somewhat similar profile is associated with the surrogate activity complex which had generally low scores in importance, interest and complexity. However, in contrast with the maintenance complex scores, the surrogate complex had the lowest confidence score of the four.

The rank orders of the mean scores were analysed using Kendall's tau to determine the correlation between the rankings in the four dimensions. The product of this analysis was coefficients of agreement between the ranked means as they appear in the four dimensions. The analysis indicates that there is a significant positive correlation between the following pairs: importance and interest, interest and complexity, and importance and complexity. The analysis suggests a somewhat negative correlation between complexity and confidence. A summary table of the results of rank correlation (Table Ten) appears below.

FIGURE TWO

Comparison of Mean Activity Scores In Terms of Importance, Interest, Complexity and Confidence of Selected Activity Complexes



Instructional ——————
Skill maintenance - - - - - - - -
Patron service .....
Maintenance —·—·—·—·—·—
Surrogate —·—·—·—·—·—

TABLE NINE

Comparison of Selected Functional Activity Complexes in Terms of Mean Importance, Interest, Confidence and Complexity Scores

	Importance	Interest	Confidence	Complexity
Instructional Activities (N = 6)	2.5	1.4	2.1	0.4
Skill Maint. Activities (N = 2)	2.2	1.8	2.0	0.6
Patron Service Act. (N = 19)	2.0	0.8	2.0	0.0
Maintenance Activities (N = 12)	0.6	(-1.3)	2.2	(-1.8)
Surrogate Activities (N = 6)	0.3	0.7	1.5	(-0.3)

TABLE TEN

Rank - Order Correlation

Coefficients Determined by Kendalls Tau

	Importance	Interest	Complexity	Confidence
Importance	-	-	-	-
Interest	.640*	-	-	-
Complexity	.505*	.609*	-	-
Confidence	.120	(-.083)	(-.263)**	

* Significant at the .001 level
** Significant at the .007 level

Activity analysis scores of the professional and non-professional staff were compared. Significant differences are indicated in Table eleven. The activities themselves are indicated in Table twelve.

The semantic differential ratings were then divided in two sub-samples--the ratings of the professional staff and the ratings of the non-professional staff--in order to discover those activities for which a significant disconsensus existed. The average ratings of the two groups, for each of the four dimensions of each activity, were compared using the Student's t test. Table Eleven lists those activities showing significant disconsensus between non-professional and professional staff on one or more semantic dimensions. Group averages (i.e., $\overline{NP}$ and $\overline{PX}$) are supplied in the table for each case of disconsensus. Table Twelve lists the activities, indicating which group--professional or non-professional--had the higher average rating.

Thirty-four activities, or a little more than one-third of the total 93, show disconsensus between the professional and non-professional groups. Of these 34, three show disconsensus on two semantic domains. There are no activities for which significant disconsensus is obtained in three or four domains. This indicates high role consensus between the professional and non-professional staff. Considering that the total number of possible cases for disconsensus are 372 (i.e., 93 activities X 4 dimensions), the 37 actual cases of disconsensus are only 10 percent.

High role consensus is a function of the low level of role specialization in the Reference Department. The wide sharing of activites between the professional staff and non-professional staff contributes to high consensus. Furthermore, in all cases of disconsensus save one, the professionals' average rating is higher than that of the non-professionals. This is expected because the professional staff presumably would have a stronger commitment to their work and consequently place a somewhat higher evaluation on it.

TABLE ELEVEN

Significant* Disconsensus in Evaluation Between

Non-Professional and Professional Staff

Activity No.	Importance		Interest		Confidence		Complexity	
	$N-P\bar{X}$	$P\bar{X}$	$N-P\bar{X}$	$P\bar{X}$	$N-P\bar{X}$	$P\bar{X}$	$N-P\bar{X}$	$P\bar{X}$
1					4.8	6.7		
4	5.4	3.6						
6			4.2	5.6				
8			3.5	5.8				
9	3.4	5.1						
10					5.6	6.5		
15					5.5	6.6		
16			3.7	6.2				
19					4.0	6.6		
23					2.5	5.7		
25			3.0	5.5				
26			3.7	5.8	3.5	5.3		
27	5.7	7.0						
30	6.0	7.0						
34			2.4	5.2				
40			2.8	6.0			4.3	6.3
42					4.5	6.2		
44			3.4	4.9				
46			5.0	6.4				
47					3.5	6.0		
48							1.8	3.7
52							4.5	5.4
54	5.5	7.0	5.3	6.6				
56			4.0	6.1				
60			1.7	4.0				
65					5.0	6.8		
66	4.7	5.7						
77	5.7	7						
84					2.0	5.7		
85					4.7	6.6		
86	5.3	7						
87							3.0	5.0
88							3.0	5.4
89	4.8	7						

* Student's t test for the two means is $< .05$ in all cases.

TABLE TWELVE

Activities with Significantly Different Mean Scores for

Professional and Non-Professional Staff

Importance-Higher for Professionals

9 - Helping handicapped persons obtain books from the stacks.

27 - Staffing: insuring that staff commands a broad range of area topical specialities.

30 - Staffing: training of professional library staff.

54 - Answering requests to find source materials on particular topics.

66 - Distributing campus guides, maps and library guides to the public.

77 - Pursuing Search Questions away from the desk.

86 - Watching the desk.

89 - Standing-by for desk duty (substitute for absent staff member or assist during heavy work period.)

Importance-Higher for Non-professionals

4 - Servicing Xerox Machines.

Interest-Higher for Professionals

6 - Refering questions to branch library

8 - Conducting Reference Service user survey.

16 - Formulating departmental policy.

25 - Staffing: - advertising for new student staff.

26 - Staffing: obtaining support staff (through personnel division).

34 - Supervising bibliography room (inventory, housekeeping, etc.)

40 - Checking appropriateness of call numbers assigned to new books.

44 - Consulting catalog department personnel about card catalog problems, such as blind references.

46 - Developing resources for academic departments.

54 - Answering requests to find source materials on particular topics.

56 - Attending library faculty meeting.

60 - Coordinating and supervising shelf reading.

Interest-Higher for Non-professionals

NONE

Confidence-Higher for Professionals

1 - Verifying bibliographic information on [book] order slips.

10 - Answering telephone questions.

15 - Assisting customers fill out request cards for items on order or still being processed.

19 - Submitting news items to (Library Staff News Letter)

23 - Staffing: making out staff work schedule.

26 - Staffing: obtaining support staff (through Personnel Division).

42 - Recommending ordering of new books and serials.

47 - Serving on library committees.

65 - Transfering superseded non-serial items from reference to stacks.

84 - Preparing annual report.

85 - Checking [book] order slips against the card catalog to be sure item not already held.

Confidence-Higher for non-professionals

NONE

Complexity-Higher for Professionals

40 - Checking appropriateness of [call] numbers assigned to new books.

48 - Keeping time sheets, of hourly employees.

52 - Teaching students how to determine proper subject headings in card catalogue.

87 - Referring reference questions to more experienced staff.

88 - Answering library policy questions.

Complexity-Higher for Non-professionals

NONE

PATRON SATISFACTION AND PATRON-STAFF CONSENSUS

The Reference Service Encounter Survey was used to obtain data on patron satisfaction and on patron-staff consensus for features of the reference encounter. The results of the survey will be discussed question by question. The reader can refer to the survey instrument (Appendix D) for the exact wording of each question.

Question Negotiation

Librarian copies of the questionnaire were checked to determine whether the responses for "patron's original question" and "what the patron really wanted" were substantially different or the same. Substantially different responses were scored as "question negotiation required"; substantially identical responses were scored as "question negotiation not required".

Table Thirteen breaks down each of these groups according to the responses given to question four, which asked how well the librarian pinpointed the patron's needs.

Patron Identification

Table Fourteen gives the number of patrons from each user status category participating in the Reference Service Encounter Survey, with a breakdown on librarian agreement and disagreement on the patron's status for each category. Because such a disproportionate number of undergraduates participated in the survey, the data presented in Table Thirteen are not suitable for statistical analysis.

TABLE THIRTEEN

Breakdown of Question Negotiation by Pinpointing of Patron Needs

Question Negotiation Required — Pinpointing		32		Question Negotiation Not Required — Pinpointing		65	
Patron resp.	Librarian resp.	No.	%	Patron resp.	Librarian resp.	No.	%
very well	very well	17	53%	very well	very well	43	66%
very well	mod. well	7	22%	very well	mod. well	11	17%
very well	poorly	1	3%	very well	poorly	2	3%
mod. well	very well	3	9%	mod. well	very well	4	6%
mod. well	mod. well	4	13%	mod. well	mod. well	5	8%

TABLE FOURTEEN

Librarian Assessment of Patron Status

User Status	No. of Patron Respondents	Librarian Agreed	Librarian Disagreed
Undergraduate	61	57	4
Graduate	18	11	7
Faculty	3	1	2
Staff	2	1	1
Other	13	9	4

Library Familiarity

Question three asked patrons to rate their general familiarity with the library and librarians to evaluate the patron's general familiarity with the library. Table Fifteen shows the number of responses that fall in each of the nine categories created by looking simultaneously at patron and librarian ratings. The patron and librarian showed consensus in 45 cases and lacked consensus in 52 cases. Of these 52 cases, the librarian rated the patron higher than he rated himself in 22 cases and rated the patron lower than he rated himself in 30 cases.

The proportion of consensus to disconsensus yields a X^2 of .38 in a single classification test of significance; the proportion of high to low librarian ratings in disconsensus cases yields a X^2 of .94 in a single classification test of significance. Niether of these scores is significant ($X^2_{.95}(1) = 3.84$). Therefore, the level of shared perceptions of patron familiarity with the library reflected in these data seems to be not significantly better than that attributable to chance.

TABLE FIFTEEN

Ratings of Patron's General Familiarity with the Library

	Librarian Response		
Patron Response	good	fair	poor
good	11	11	3
fair	9	23	16
poor	4	9	11

Patron Needs Identification

Question four asked patrons and librarians how well the librarian was able to pinpoint the patron's needs. Their combined responses are shown in Table Sixteen.

TABLE SIXTEEN

Ratings of Librarian's Success in Pinpointing Patron's Needs

	Librarian Response		
Patron Response	very well	moderately well	poorly
very well	60	18	3
moderately well	7	9	0
poorly	0	0	0

The ratings given in Table Sixteen show consensus in 69 cases, disconsensus in 28 cases. Of the 28 cases of disconsensus, the librarian's rating was higher than the patron's in 7 cases, and the patron's rating was higher than the librarian's in 21 cases. The level of consensus on this question is highly significant; a single classification X^2 test of

the proportion of consensus to disconsensus yields a X^2 of 16.50 ($X^2_{.9995}(1) = 12.12$). The tendency of librarians to underrate their success at pinpointing the patron's needs is statistically significant as well, with a single classification of 6.04 ($X^2_{.975}(1) = 5.02$).

Information Quantity

Table Seventeen shows combined patron and librarian responses to the question asking how much information the librarian provided the patron.

TABLE SEVENTEEN

Ratings of Amount of Information Patron Received

	Librarian Response		
Patron Response	Too little	Right amount	Too much
Too little	6	3	0
Right amount	15	69	0
Too much	1	3	0

The librarian and patron achieved consensus on the amount of information exchanged in 75 cases and failed to achieve consensus in 22 cases. The significance level of this proportion in a single classification X^2 test is extremely high; $X^2 = 16.5$ ($X^2_{.9995}(1) = 12.12$).

In the 22 cases of disconsensus, the librarian over-estimated the amount of information given in 3 cases and under-estimated the amount of information given in 19 cases. This proportion yields a single classification X^2 of 10.22 ($X^2_{.995}(1) = 7.88$), indicating that the tendency of librarians to underrate the amount of information provided to patrons is statistically significant.

Patron Instruction

The final question asked both patron and librarian to state whether or not the librarian had instructed the patron in the use of a reference tool or library facility during the encounter. Table Eighteen shows combined patron and librarian responses.

TABLE EIGHTEEN

Occurrence of Library Skills Instruction

	Librarian Response	
Patron Response	Yes	No
Yes	34	22
No	18	21

Patron and librarian reports on the presence or absence of instruction agree in 55 cases and disagree in 42 cases. This proportion yields a single classification X^2 of 1.48, which is above the .05 level of significance. A X^2 test of independence for Table Eighteen yields a X^2 of 1.42. Because this X^2 value is not significant, it is not possible to reject the hypothesis that librarians' responses and patrons' responses on the question of instruction are independent of one another.

However, if only the subgroup of satisfied users, i.e. those reporting that they received "about the right amount of information," is considered, the level of consensus achieved on the question of instruction improves. Table Nineteen presents combined patron and librarian responses on question six for the 84 cases in which patrons were satisfied with the amount of information received.

TABLE NINETEEN

Occurrence of Library Skills Instruction for Satisfied Patrons

	Librarian Response	
Patron Response	Yes	No
Yes	34	18
No	13	19

The X^2 test of independence for this table yields a X^2 of 3.97 ($X^2_{.95}(1) = 3.84$), indicating that the responses of satisfied patrons and librarians regarding instruction probably are not mutually independent. There are 53 cases of consensus and 31 cases of disconsensus concerning instruction among the satisfied patrons. The single classification X^2 for this proportion is 5.26 ($X^2_{.975}(1) = 5.02$), indicating a significant level of consensus between librarians and satisfied patrons on the question of instruction.

Conversely, in every case where patron and librarian agreed that instruction had occurred, the patron was satisfied with the amount of information received. Thus all dissatisfied patrons either were not instructed by the librarian or perceived that instruction had occurred when in fact the librarian had not intended to instruct. Table Twenty presents a cross-tabulation of the scores for questions five and six. Every indication points to a clear relationship between instruction in library skills that is correctly perceived by the patron and patron satisfaction.

TABLE TWENTY

Cross-Tabulation of Responses on Instruction and Amount of Information

Instruction Occurred			Amount of Information Provided			Patron Satisfaction	
Patron	Librarian	No.	Patron	Librarian	No.	Yes	No
Yes	Yes	34	right amount	right amount	31	34	0
			right amount	too little	3		
Yes	No	24	right amount	right amount	13	18	6
			right amount	too little	5		
			too little	right amount	1		
			too little	right amount	1		
			too much	too little	1		
			too much	right amount	1		
No	Yes	18	right amount	right amount	10	13	5
			right amount	too little	3		
			too much	right amount	1		
			too little	right amount	2		
			too little	too little	2		
No	No	21	right amount	right amount	15	19	2
			right amount	too little	4		
			too much	right amount	1		
			too little	too little	1		

SUMMARY

The analysis resulted in a broad range of data on various aspects of the role performance of the members of the reference department. This section of the report will enumerate the more noteworthy results of the inquiry.

1. Of the total range of activities carried out, a larger share of the activities are done by professional staff than non-professional.
2. Analysis of activity sharing indicates that the reference department has a rather low level of functional specialization (or bureaucratization).
3. Analyses of high congruence pairs does indicate clustering of staff along professional and non-professional lines. A core of activities can be defined for each category. Staff evaluation of activities also indicated some significant differences between professional and non-professional staff in terms of importance, interest, confidence and complexity evaluations.
4. The evaluation of the activities based on the semantic differential technique indicates a highly positive evaluation of instructional, skill maintenance and patron service activities and a slightly positive evaluation of maintenance and surrogate activities in terms of importance. The highest set of activities in terms of interest score are those associated with skill maintenance with a moderately positive score. Instructional activities are also moderately positive. Patron service and

surrogate activities are somewhat positive, whereas maintenance activities are rated as moderately negative. In terms of confidence there was relatively little variation with most scores being scored near the top of the moderately positive category. Maintenance activities were scored as the least complex. Skill maintenance and instructional activities were viewed as the most complex. Patron service and surrogate activities were intermediate between the extremes.

5. Activity mean score rank-order correlation analysis suggests the staff find activities interesting that are rated as important to the department. The staff seem most interested in more complex activities.
6. Role consensus between the professional staff and the non-professional staff is quite high. This is attributable to the fact that role activities in the Reference Department are widely shared between both groups.
7. The reference encounter survey indicated that approximately one-third of the patron-staff reference encounters required significant patron-staff negotiation.
8. The procedure calculated to determine the staff's ability to determine patron status was inconclusive.
9. The procedure calculated to determine the staff's ability to judge patron's familiarity with the library was inconclusive.
10. Analysis suggests that the reference staff effectively "pinpointed" patron needs. About 80 percent of the patrons indicated that the staff "pinpointed" their needs well. The staff tended to underrate their success in this area.

11. According to patrons' evaluations the staff provided the right amount of information in 87 opercent cf the encounters. Again the staff significantly underestimated their performance in this area.

12. The research produces some insights into attributes of effective reference service. The data indicate a positive relationship between instruction and patron satisfaction.

All cases where the librarian and patron agreed that instruction had occurred had a successful outcome. All cases which indicate some patron dissatisfaction occur where there is consensus that no instruction occurred or disagreement about the presence of instruction activities.

This suggests that reference service effectiveness in dealing with the patron can be increased by emphasizing the role of the reference librarian as teacher rather than the more passive conception of the reference librarian as information source. Information should be provided in such a way as to add to the patron's skill in library use, rather than merely providing information to meet short-term client needs. This suggests that reference librarians should be encouraged to more explicitly conceptualize themselves as teacher. This is consistent with the view that librarians be regarded administratively as faculty rather than staff. The research did not determine the teaching skills which are relevant to the fleeting "classroom" encounter of the reference librarian.

APPENDIX A: PERSONAL BACKGROUND INTERVIEW FORM

PERSONAL BACKGROUND INTERVIEW--MIK LIBRARY REFERENCE PROJECT

(starred questions are to be omitted for personnel who are now students)

1. Job History (include non-library work experience)

Library	Location	Department	Position	Time Period

*2. Library school attended Degree Dates

3. Reference-related library science courses
   a) Subject of course
      Humanities
      Social sciences
      Natural Science
      Government documents
      Theory of reference department management
      Subject bibliography (list)

      Other (list)

   b) Teaching methods employed in these courses
      Sample questions
      Learning content of particular reference materials
      Preparing bibliographies
      Discussion of theory of reference dept. management
      Discussion of dealing with the public
      Practical experience working in a reference department
      Other (list)

4. What aspects of reference work were you best prepared for by these courses?

   What aspects of reference work were you least prepared for by these courses?

5. Training for your present job
   a) formal orientation, on-the-job training program, etc.

   b) informal methods of learning new job situation

*6. How do you keep informed about new reference materials?

*7. Association memberships
   ALA committees or offices?
   other committees or offices?

*8. What library journals do you find most pertinent to your needs? Useful for articles and/or bibliographic information?
   Title articles bibliographic information

APPENDIX B: ACTIVITY INVENTORY FORM

Date:
Informant:
Interviewer:

ACTIVITY INVENTORY

Activity	Specialization	Social Interaction	Frequency

APPENDIX C: REFERENCE ACTIVITY INVENTORY

Reference Activity Inventory

1. Verifying bibliographic information on green order slips.
2. Convening of semi-monthly staff meetings.
3. Consulting with library administration on policy planning and development.
4. Servicing Xerox machine.
5. Typing orders for new books and serials.
6. Referring questions to branch library.
7. Orienting clients to the layout of MIK.
8. Conducting Reference Service user survey.
9. Helping handicapped persons obtain books from the stacks.
10. Answering telephone questions.
11. Compiling bibliographies or fact sheets on topics of current interest.
12. Trouble-shooting problems related to technical services.
13. Checking Library of Congress weekly list of unlocated books.
14. Enforcing rules against eating in the library, bringing animals into the buildings, etc.
15. Assisting customers fill out request cards for items on order or still being processed.
16. Formulating departmental policy .
17. Giving tours to freshman students on library use.
18. Paging patrons who receive phone calls at the library.
19. Submitting news items to the Green Bean.
20. Replacing book stickers.
21. Picking up payroll checks.
22. Answering phone for Instructional Services and AIDS.

23. Staffing: making out staff work schedule.

24. Staffing: filling unexpected vacancy in work schedule.

25. Staffing: advertising for new student staff.

26. Staffing: obtaining support staff (through UK Personnel Division).

27. Staffing: insuring that staff commands a broad range of area topical specialities.

28. Staffing: interviewing prospective staff members.

29. Staffing: searching for new staff members.

30. Staffing: training of professional librarian staff.

31. Lecturing to class on reference resources pertinent to their subject area.

32. Keeping reference department staffed and operating all hours the library is open.

33. Signing out items kept at desk for building use.

34. Supervising bibliography room (inventory; housekeeping, etc.)

35. Reshelving books.

36. Indexing Courier-Journal.

37. Acting as liaison for academic departments.

38. Maintaining college catalog collection.

39. Supervising reference room (inventory, housekeeping, etc.)

40. Checking appropriateness of Dewey numbers assigned to new books.

41. Tending Interlibrary Loan truck during hours when Interlibrary Loan is closed.

42. Recommending ordering of new books and serials.

43. Handling questions coming in by mail.

44. Consulting catalog department personnel about card catalog problems, such as blind references.

45. Teaching use of card catalog, periodical indexes, etc.

46. Developing resources for academic departments.

47. Serving on library committees.

48. Keeping time sheets of hourly employees.

49. Training student assistants.

50. Closing bibliography room at night.

51. Interpreting information on catalog cards.

52. Teaching students how to determine proper subject headings in card catalogue.

53. Starting students on a paper.

54. Answering requests to find source materials on particular topics.

55. Checking journal book reviews for book selection.

56. Attending library faculty meeting.

57. Straightening chairs, etc.

58. Sending items to be rebound or repaired.

59. Consulting with catalog department about weeding items from the stacks.

60. Coordinating and supervising shelf reading.

61. Recording and filing additions to series and looseleaf items.

62. Transfering old series items from reference collection to stacks.

63. Closing reference room at night.

64. Studying reference materials and becoming acquainted with new items.

65. Transfering superseded non-serial items from reference collection to stacks.

66. Distributing campus guides, maps, and library guides to the public.

67. Keeping tally of questions received at the desk.

68. Preparing monthly report.

69. Processing new acquisitions.

70. Answering strictly factual questions.

71. Keeping statistics on volumes in reference collection.

72. Checking published bibliographies to see whether library owns items.

73. Answering questions on library procedures, e.g. what to do if book not on shelves.

74. Maintaining "books on order" and "orders received" records.

75. Reading shelves.

76. Compiling user guides in various subject areas.

77. Pursuing search questions away from the desk.

78. Maintaining and updating departmental shelf list.

79. Answering "how to use" questions.

80. Answering ready reference questions.

81. Looking out for people who seem to need help.

82. Answering directional questions.

83. Checking reference bibliography serials list.

84. Preparing annual report.

85. Checking green order slips against the card catalog to be sure item not already held.

86. Watching the desk.

87. Referring reference questions to more experienced staff.

88. Answering library policy questions.

89. Standing-by for desk duty (substitute for absent staff member or assist during heavy work period).

90. Editing user guides and bibliographies.

91. Preparing for anticipated questions, e.g. class assignments, current events.

92. Taking phone calls on Data Services line.

93. Attending reference staff meetings.

APPENDIX D: REFERENCE ENCOUNTER QUESTIONNAIRES

No. _____

Date_____

Time_____

Patron Copy
REference Service Encounter Survey

1. What did you ask the reference librarian?

2. Are you? (check one)

___U.K. undergraduate student
___U.K. graduate student
___U.K. faculty
___U.K. staff
___other_____

3. How would you rate your familiarity with this library?

___Good
___Fair
___Poor

4. How well did the reference librarian pinpoint your needs?

___Very well
___Moderately well
___Poorly

Comments:

5. Did you receive (check one)

___too little information?
___about the right amount of information?
___more information than you wanted or could use?

6. While assisting you, did the librarian instruct you in the use of reference materials or facilities, such as the card catalog, bibliographic indexes, etc.?

___Yes
___No

If yes, what did you learn?

NO. _____

Name_____

Reference Service Encounter Survey
Reference Staff Copy

1. What was the patron's original question?

   What did the patron really want?

2. On the basis of this encounter, I would guess that this patron is

   ___U.K. undergraduate student
   ___U.K.graduate student
   ___U.K. faculty
   ___U.K. staff
   ___other_____

3. On the basis of this encounter, I would judge the patron's level of familiarity with this library and its resources to be:

   ___Good
   ___Fair
   ___Poor

4. During the question negotiation process, how well did you pinpoint the patron's needs?

   ___Very well
   ___Moderately well
   ___Poorly

   Comments:

5. Do you think the patron

   ___Got less information than he wanted?
   ___was satisfied with the amount of information?
   ___got more information than he wanted?

6. While assisting the patron, did you instruct him how to use reference materials or facilities?

   ___Yes
   ___No

   If yes, what materials or facilities?